

### **REMARKS**

These remarks and the accompanying amendments are responsive to the Office Action dated April 16, 2009 (hereinafter referred to as the "Office Action"). At the time of the last examination, Claim(s) 21-33, of which Claims(s) 21, 22, 24, 26, 27, 28, 29, 31 and 32 are independent. The Office Action rejected Claim(s) 21, 23-29, 31 and 32, allowed Claim(s) 22 and 33, and objected to Claim(s) 30.

Section 3 of the Office Action rejects Claim(s) 21, 23, 24-29, 31 and 32 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 6,259,683 issued to Sekine (the patent hereinafter referred to simply as "Sekine") in view of United States patent publication number 2002/0181558 applied for by Ogawa et al. (the patent publication hereinafter referred to simply as "Ogawa").

By this response, no claims are amended. Claim 34 has been newly added. Claims 21-34 remain pending. Claims 21, 22, 24, 26, 27, 28, 29, 31, 32, and 34 are independent claims which remain at issue. Support for the newly added claim may be found, *inter alia*, within the claims as originally presented (e.g., claims 21-22) and within the Specification pp. 45-46.<sup>1</sup>

#### **Concerning the cited references:**

Sekine was already referred in the second Office Action dated August 8, 2006. Sekine is distinct from the present invention as discussed previously in the response to the second office action, and had been withdrawn from consideration. We would, however, like to emphasize differences between subject matter of the present invention and Sekine again as in the discussion below.

Ogawa (US 2002/0181558) cited in the current office action is not prior art since the filing date thereof is June 21, 2002, and the publication date thereof is December 5, 2002. The priority date of the subject application is June 15, 1999. However, another Ogawa (U.S. Patent 6738411) – cited in the sixth office action – which is the parent of US 2002/0181558, is prior art

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<sup>1</sup> It should be noted, however, that the present invention and claims as recited take support from the entire Specification and original claims. As such, no particular part of the Specification should be considered separately from the entirety of the Specification.

under 35 U.S.C. 102(e). Therefore, we postulate that the previous Ogawa (U.S. Patent 6738411) was cited again in the current office action.

**Re: Claim 21**

The Examiner states that Sekine (U.S. Patent 6259683) discloses an information management method for cell search in a mobile communication system. However, this understanding is fundamentally incorrect. Cell search is not disclosed in Sekine. Sekine discloses a technique for matching a phase of data received from a second base station expected to newly set up a communication channel with the mobile station with a phase of data received from a first base station currently holding a communication channel with the mobile station. For this purpose, the mobile station determines the difference between the transmission phases of frame synchronizing signals from both base stations. Sekine discloses, as its title suggests, correction of the phase difference.

In any event, Sekine does not disclose the capturing step in a handover-source base station, as stated in claim 21, since a long period spreading code of a common control channel is not disclosed in Sekine.

The Examiner states that figure 4 and column 7, lines 3-7 of Sekine disclose a transmitting step of transmitting the stored phase difference information to a mobile station. However, in Sekine, the mobile station sends phase difference information determined in the mobile station to the first base station, and then the first base station transfers the phase difference information to the second base station, whereby the second base station corrects the phase of data to be sent to the mobile station.

Ogawa discloses cell search. However, Ogawa does not disclose a storing step of storing, in said handover-source base station and/or its control station, the captured phase difference information. Element 40, which is referred to in the current office action, is a cell search controller. The cell search controller 40 is utilized by the mobile station to determine a spreading code used in a visited cell from among a plurality of spreading codes which are

generated by a spread code generation 30 which simultaneously generates the plurality of spread codes (*see* ¶¶ [0073]-[0077]). "Phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station. Furthermore, storing phase difference information in a base station and/or its control station is not disclosed by Ogawa.

Therefore, neither Sekine nor Ogawa discloses the claimed capturing step, the claimed storing step, or the claimed transmitting step.

**Re: claim 23**

The Examiner states that Sekine discloses supplying, from a control station that stores the phase difference information to said base station, the phase difference information between said base station and its neighboring base stations from among the phase difference information stored. However, the Examiner states in the statement regarding claim 21, on which claim 23 depends, that Sekine does not disclose storing the phase difference information in a control station. Indeed, Sekine does not disclose storing the phase difference information in a control station.

Further, Sekine does not disclose supplying phase difference information from a control station to a base station. Column 5, lines 48–65, to which the Examiner refers, pertain to phase difference information determined in the mobile station being sent to the first base station by the mobile station.

**Re: claims 24 and 25**

The Examiner states that Sekine discloses a cell search method of a mobile station. However this understanding is fundamentally incorrect. Cell search is not disclosed in Sekine. Sekine discloses a technique for matching a phase of data received from a second base station expected to newly set up a communication channel with the mobile station with a phase of data received from a first base station currently holding a communication channel with the mobile

station. For this purpose, the mobile station determines the difference between the transmission phases of frame synchronizing signals from both base stations. Sekine discloses, as its title suggests, correction of the phase difference.

Further, Sekine does not disclose the receiving step in a mobile station stated in claim 24 since a long period spreading code of a common control channel is not disclosed in Sekine.

The Examiner states that Sekine discloses a receiving step of receiving phase difference information from a base station. However, in Sekine, the mobile station sends phase difference information determined in the mobile station to the first base station, and then the first base station transfers the phase difference information to the second base station, whereby the second base station corrects the phase of data to be sent to the mobile station.

Ogawa discloses cell search. However, cell search in accordance with the received phase difference information is not disclosed in Ogawa. Ogawa does not even disclose that the mobile station receives the phase difference information from the base station. "Phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

The Examiner does not refer to the subject matter of claim 25. Indeed, neither Sekine nor Ogawa discloses the subject matter of claim 25. The subject matter of claim 25 is that the mobile station carries out the cell search within a fixed time interval (within the search window) based on the relative phase information acquired from the base station.

As described on page 52, lines 11–22, of the specification of the present application, the subject matter of claim 25 contributes to achieve an object of the present invention, i.e., to provide the inter-base station asynchronous system capable of enabling the mobile station to implement fast cell search when the mobile station is in a standby mode or enters a soft handover mode.

**Re: claim 26**

The Examiner states that Sekine does not disclose a long period spreading code of a base station and a long period spreading code of a neighboring base station, and that Ogawa discloses a long period spreading code of a base station and a long period spreading code of a neighboring base station. However, "phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

**Re: claim 27**

The phase difference information in claim 27 is supplied from the control station to the base station. The Examiner states in the objection of claim 21 that Sekine does not disclose storing the phase difference information in the control station. Indeed, Sekine does not disclose storing the phase difference information in the control station.

Further, Sekine does not disclose either that the phase difference information is supplied from the control station to the base station.

The Examiner states that Ogawa discloses a long period spreading code of a base station and a long period spreading code of a neighboring base station. However, "phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

**Re: claim 28**

The Examiner states that Sekine discloses a control station comprising storing means. However, in Sekine, the mobile station sends phase difference information determined in the mobile station to the first base station, and then the first base station transfers the phase difference information to the second base station, whereby the second base station corrects the phase of data to be sent to the mobile station. The control station in Sekine does not pertain to

the phase difference information.

The Examiner states that Ogawa discloses a long period spreading code of a base station and a long period spreading code of a neighboring base station. However, "phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

**Re: claim 29**

Claim 29 states that the phase difference information is captured by the mobile station from the base station. However, in Sekine, the mobile station sends phase difference information determined in the mobile station to the first base station, and then the first base station transfers the phase difference information to the second base station, whereby the second base station corrects the phase of data to be sent to the mobile station. The phase difference information is not sent again from the base station to the mobile station.

Ogawa discloses cell search. However, cell search in accordance with the received phase difference information from the base station is not disclosed in Ogawa. Ogawa does not even disclose that the mobile station receives the phase difference information from the base station. "Phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

Neither Sekine nor Ogawa discloses a long period spreading code of a common control channel from a base station. The Examiner admits in the rejection of claim 26 that Sekine does not disclose the long period spreading code of the base station and a long period spreading code of a neighboring base station. In addition, "phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

**Re: claim 31**

Sekine does not disclose the base station storing means stated in claim 31 since it does not disclose the long period spreading code of the common control channel.

Claim 31 states that the phase difference information is captured from the base station to the mobile station. However, in Sekine, the mobile station sends phase difference information determined in the mobile station to the first base station, and then the first base station transfers the phase difference information to the second base station, whereby the second base station corrects the phase of data to be sent to the mobile station. The phase difference information is not sent again from the base station to the mobile station.

Ogawa discloses cell search. However, cell search in accordance with the received phase difference information from the base station is not disclosed in Ogawa. Ogawa does not even disclose that the mobile station receives the phase difference information from the base station. "Phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

Neither Sekine nor Ogawa discloses a long period spreading code of a common control channel from a base station. The Examiner admits in the rejection of claim 26 that Sekine does not disclose the long period spreading code of the base station and a long period spreading code of a neighboring base station. In addition, "phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

**Re: claim 32**

Sekine does not disclose the base station storing means since it does not disclose the long period spreading code of the common control channel. The control station disclosed in

Sekine does not pertain to the phase difference information. Therefore, Sekine does not disclose the control station storing means for storing phase difference information supplied from the control station.

Claim 32 states that the phase difference information is captured from the base station to the mobile station. However, in Sekine, the mobile station sends phase difference information determined in the mobile station to the first base station, and then the first base station transfers the phase difference information to the second base station, whereby the second base station corrects the phase of data to be sent to the mobile station. The phase difference information is not sent again from the base station to the mobile station.

Ogawa discloses cell search. However, cell search in accordance with the received phase difference information from the base station is not disclosed in Ogawa. Ogawa does not even disclose that the mobile station receives the phase difference information from the base station. "Phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

Neither Sekine nor Ogawa discloses a long period spreading code of a common control channel from a base station. The Examiner admits in the rejection of claim 26 that Sekine does not disclose the long period spreading code of the base station and a long period spreading code of a neighboring base station. In addition, "phase" in Ogawa means a phase of each spreading code which the mobile station generates. It does not mean a phase of a long period spreading code of a common control channel from a base station.

**Re: claim 34**

Claim 34 is newly added. Claim 34 presents a generalization of claims 21 and 22 and is supported by both claims 21 and 22 as well as the Specification pp. 45–46. The Applicants respectfully request full and due consideration of the newly presented claim 34.



In accordance with the above discussion, the Applicants respectfully request the examiner to favorably reconsider each of the pending claims not yet indicated as allowed. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone or an in-person interview, the Examiner is requested to contact the undersigned attorney.

Dated this 16<sup>th</sup> day of July, 2009.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Tom M. Bonacci". The signature is fluid and cursive, with a large loop at the end.

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